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## Rescue Trailers With Grain Vacs Help Rural Fire Departments

The special trailer that the Gibbon Fire Department designed and built for rural rescue (Vol. 47, No. 6) is now available for sale to other fire departments.

"I started the company R3 Rescue, which is designed to empower and equip rural fire departments," says Nate Firlle of Gibbon, Minn.

The heart of the R3 Rescue (Rural, Rescue, Response) trailer is a grain vacuum. In addition to selling trailers, the business offers training solutions for grain bin rescues using the grain vacuum and entrapment panels.

The Gibbon fire department members decided to add a grain vacuum to their equipment after successfully rescuing a farmer trapped in a bin of corn using a nearby farmer's vacuum.

Working with manufacturers, the firefighters custom-designed an 18-ft. trailer with a mounted skid vac system with 185 ft. of vac tubing and entrapment panels. The trailer also includes equipment to handle other rural-related farm incidents, such as tractor rollovers or farm implement accidents.

"We take it on a low percentage of calls, for any farm equipment accidents or grain entrapments, so we know we have the right tools. We provide mutual aid to eight surrounding fire departments for grain bins or grain-related fires or accidents," Firlle says.

Since building the trailer, they haven't had any grain rescue calls, but the vac was used to remove smoldering fiberglass insulation in an attic fire. That prevented a lot of damage that would have occurred with water to put out the fire, Firlle notes.

Though it may not be needed often, rural fire departments recognize the value of the grain vac and equipment on the R3 Rescue trailer. Some departments don't need as much storage space, so Firlle offers a 12-ft. trailer option that's a vac and pipe kit on wheels. Other departments only want the vac or information he provides about obtaining grants to purchase equipment.

"One fire chief said that having a trailer elevated their confidence when thinking about rural rescue," Firlle says, noting he provides two hours of training when delivering the trailer.

He's seen that confidence in his own fire department, where the number of applicants outnumber positions vacated by retiring firefighters. Some Gibbon firefighters help outfit the trailers, and a portion of the sales goes to the fire department.

Two R3 Trailers have been delivered and are in service, multiple vac and pipe kits are also in service, and eight additional fire departments in the U.S. are fundraising to purchase a trailer.

"There are few resources for rural departments to keep up with the evolving rescues, including grain bin entrapments, in rural America, so our mission is to equip rural fire and rescue departments with the equipment, training and confidence needed."

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Although UTVs may have reduced demand for powered trailers, Dufour says some customers still appreciate their versatility.

## Powered Trailer Turns Walk-Behind Tractor Into Mini-Truck

Hook up the PTO-powered trailer from Erreppi to a heavy-duty, walk-behind tractor, and it's like a mini-truck, suggests Joel Dufour. Dufour has owned, used and sold the trailers for around 20 years. His firm, Earth Tools, specializes in walk-behind tractors and attachments.

"I've hauled sand, gravel, firewood and garden produce with the powered trailer on our farm," says Dufour. "It has no problem climbing a 45-degree slope, depending on soil surface and available traction. Possible use is more a question of the walk-behind's engine power."

An oscillating swivel joint built into the frame ensures all four trailer wheels and the walk-behind stay on the ground. The trailer can carry almost a ton of payload in its 55-in. by 71-in. bed. When the 12-in. deep removable sides are filled level, it has a capacity of 27 cu. ft. The flatbed has pockets to accept taller sides or other extensions, as well as tie-downs on the corners. Installation or removal of the trailer from the walk-behind takes only 10 to 15 min.

Dufour recommends the Erreppi trailer

be matched with the 16-hp Grillo or the 20-hp Barbieri Leopard. The trailer requires a PTO that synchronizes with the tractor's ground speed. It's an option on the Grillo but a standard feature on the Barbieri Leopard. Dufour notes that some older BCS models also have synchronized PTO; however, newer ones don't. The trailer starts at \$4,250.

"Years ago, almost all Italian walk-behinds had the option of synchronized PTO," says Dufour. "That has changed with the advent of UTVs with suspension. The only suspension with the Erreppi trailer is under the operator's seat."

Although UTVs may have reduced demand for powered trailers, Dufour says some customers still appreciate their versatility.

"Customers who buy one of the larger walk-behinds often do so with the trailer in mind," he says. "They appreciate the quality of construction and performance."

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## Google Earth Farm Planner

Steve Gabriel uses Google Earth to identify the location of each maple tree he plans to tap. By adding a terrain layer, he can see how to lay out tubing for the gravity vacuum flow of sap to collection points. He also uses it to plan his grazing rotation, cropping and drainage patterns. He even uses it to gain nearly 30 years of historical perspective on his farm.

"Once you find an image of your farm, you can look back at images gathered every few years back to 1995," says Gabriel.

Gabriel doesn't just use Google Earth on Wellspring Forest Farm, his own farming operation. As an extension educator with the Cornell Small Farms Program, he taught others how to use it. His 2019 four-part YouTube series on Google Earth for Farmers thoroughly introduces the software and how to use it on your farm.

Farm planning has come a long way since the days of jotting planting dates in a seed company notebook. Gabriel and Google Earth take it even farther. While there are many YouTube videos on the subject, Gabriel's are focused, with a complete step-by-step approach that includes how to overlay the original map with new layers,

insert data, save layers, and access them in the future for endlessly customized aerial views. Finally, he covers importing entire data sets, such as soil and environmental data, to add great depth to planning.

He begins part one by opening the software and displaying his farm. He then walks through basic geographic information data (GIS), starting with latitude, longitude and elevation. He then explains how to view the aerial image from different perspectives and access data sets in the software. These include tax parcel information, terrain and the historical information mentioned above.

In part two, he moves on to inserting points, lines and polygons (shapes of all types), including distances from one point to another and areas inside a shape. Once a point, line or area has been defined, it can be labeled with information added in a notes field. When that layer is brought up in the future, additional information can be added, such as planting dates, harvest data or dates pasture paddocks were rotated and the number of animals.

"The measurement tool is phenomenal for designing and planning on the farm," says Gabriel. "Use a line to plan a fence or a polygon to plan the perimeter and area of a

paddock. Save the layer and then return later and change the shape as plans change."

As he covers the basics of outlining fields and other landscape features, he repeatedly emphasizes the importance of saving and organizing the layers in folders for future access.

"You can never save your work enough," says Gabriel. "Periodically, save your layers to their folders. If not, and the program crashes, you lose anything unsaved."

In part three, Gabriel demonstrates how to create property boundaries using temporary overlays of a survey map. He describes browsing the web for maps, identifying suitable types, downloading them to a desktop, and opening them in Google Earth.

A custom topographical map can be created using one of the online contour-generating programs. Instead of the standard 20-ft. intervals of a typical contour map, set intervals to only a few feet to identify swales, dig new ones, or create catchment basins.

Locating and accessing data sets like SoilWeb requires a similar approach. An interactive map created at the University of California, Davis, is based on the USDA-NCSS soil survey. Gabriel recommends it as easier to work with than the NRCS version. This is just the beginning of what's available.

"You can go to your browser and find water data from the EPA or check for data from your



Google Earth view of maple trees for tapping.

state government," he says. "Just look for file extensions of .kml, .mxd or .shp. Google Earth accepts all three."

In part four, Gabriel walks the viewer through several software applications for his farming operation. He demonstrates planning and mapping field roads and paths. He also shares mapping woods he leases for maple syrup production, including tree locations and collection points. As in the earlier parts of the series, Gabriel's examples bring home the potential value of Google Earth for farmers.

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